

**WHAT IS CLAIMED IS:**

1. An enteral feeding adapter for use with a medical feeding device to deliver substances into a patient, the enteral feeding adapter suitable for use with a plurality of infusion sets having distal connectors of differing dimensions, the enteral feeding adapter comprising:

10 an adapter body containing at least a first port configured for receiving a distal connector of an infusion set, the first port having at least one arcuate sidewall for frictionally engaging the distal connector to sealingly secure the distal connector to the adapter body; and

a tube extending between the first port and the medical feeding device for transmitting substances that pass through the first port to the medical device.

15 2. An enteral feeding adapter according to claim 1, further comprising a second port configured for injection of medication therethrough into the tube.

3. The enteral feeding adapter according to claim 1, wherein the at least one arcuate sidewall has a radius of curvature between about 0.18 inches and 0.55 inches.

20 4. The enteral feeding adapter according to claim 3, wherein the radius of curvature of the at least one arcuate sidewall is between about 0.18 inches and 0.22 inches.

5. The enteral feeding adapter according to claim 4, wherein the radius of curvature of the at least one arcuate sidewall is about 0.20 inches.

25 6. The enteral feeding adapter according to claim 3, wherein the radius of curvature of the least one arcuate sidewall is between about 0.22 and 0.24 inches.

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7. The enteral feeding adapter according to claim 6, wherein the radius of curvature of the at least one arcuate sidewall is about 0.23 inches.

8. The enteral feeding adapter according to claim 3, wherein the radius of curvature of the at least one arcuate sidewall is between about 0.45 and 0.55 inches.

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9. The enteral feeding adapter according to claim 8, wherein the radius of curvature of the at least one arcuate sidewall is 0.50 inches.

10. The enteral feeding port according to claim 1, wherein the at least one arcuate sidewall defines a proximal portion of the first port, and wherein the first port further includes a second arcuate sidewall.

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11. The enteral feeding port according to claim 10, wherein the second arcuate sidewall is disposed distally of the first arcuate sidewall.

12. The enteral feeding port according to claim 10, wherein the first arcuate sidewall has a radius of curvature between about 0.45 and 0.55 inches and wherein the second arcuate sidewall has a radius of curvature between about 0.22 and 0.24 inches.

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13. The enteral feeding port according to claim 10, wherein the first port further includes a cylindrical section disposed proximally of the first arcuate sidewall and the second arcuate sidewall.

14. The enteral feeding adapter according to claim 10, wherein the first port further includes a cylindrical portion distal of the first arcuate sidewall and proximal of the second arcuate sidewall.

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15. The enteral feeding adapter according to claim 10, wherein the first port further includes a third arcuate sidewall distal of the second arcuate sidewall.

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16. The enteral feeding adapter according to claim 15, wherein the first arcuate sidewall has a radius of curvature of between about 0.45 and 0.55 inches, wherein the second arcuate sidewall has a radius of curvature of between about 0.22 and 0.24 inches and wherein the third arcuate sidewall has a radius of curvature of between about 0.18 and 0.22 inches.

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17. The enteral feeding adapter according to claim 15, wherein the first arcuate sidewall has a varying diameter between about 0.330 and 0.220 inches, wherein the second arcuate sidewall has a varying diameter between 0.220 and 0.153 inches, and wherein the third arcuate sidewall has a varying diameter between 0.153 and 0.127 inches.

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18. An enteral feeding adapter configured for receiving the distal end of an infusion set and for communicating with a medical feeding device to transmit substances into a patient, the enteral feeding adapter comprising:

an adapter body having a first port, the first port having at least a cylindrical first section and a second section defined by a first arcuate sidewall disposed distally of the first section, the first arcuate sidewall being configured to frictionally engage the distal end of the infusion set; and

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a tube extending between the adapter body and the medical feeding device for transmitting the substances from the infusion set to the medical device and thereafter into the patient.

5           19.    The enteral feeding adapter according to claim 18, wherein a diameter of  
the second section decreases from a proximal end of the second section to a distal end of  
the second section.

          20.    The enteral feeding adapter according to claim 18, wherein the first port  
further includes a third section disposed adjacent to the second section, the third section  
10   being defined by a second arcuate sidewall.

          21.    The enteral feeding adapter according to claim 20, wherein the first  
section, second section, and third section form a distally extending channel having an  
increasingly smaller diameter.

          22.    The enteral feeding adapter according to claim 20, wherein the first port  
15   further includes a fourth section disposed adjacent to the third section, the fourth section  
being defined at least partially by a third arcuate sidewall.

          23.    The enteral feeding adapter according to claim 22, wherein the first  
arcuate sidewall has a radius of curvature between about 0.45 and 0.55 inches, wherein  
the second arcuate sidewall has a radius of curvature between about 0.22 and 0.24  
20   inches, and wherein the third arcuate sidewall has a radius of curvature between about  
0.18 and 0.22 inches.

SubD 7           24.    A method of connecting an infusion set to an enteral feeding adapter  
comprising:

(a)    selecting an infusion set having a distal end;



30. The method according to claim 29, wherein the method further includes passing nutrient solution through the infusion set and the channel once the infusion set has sealingly engaged one of the arcuate sidewalls.

31. The method according to claim 24, wherein the method comprises inserting the distal end of an infusion set having an outer diameter of between about 0.127 inches and 0.330 inches into the first port and advancing the distal end until it engages an arcuate sidewall.

32. A method for attaching an infusion set to an enteral feeding adapter, the method comprising:

(a) selecting an infusion set having a distal end with an outer diameter between about 0.127 inches and 0.330 inches;

(b) selecting an adapter body with a port configured to selectively receive infusion sets having different outer diameters between about 0.127 and 0.330 inches; and

(c) advancing the distal end of the infusion set in the port until the infusion set securely engages the adapter body.

33. The method according to claim 32, wherein the method includes selecting an adapter body in which the port has at least one arcuate sidewall.

34. The method according to claim 32, wherein the method includes selecting an adapter body with a port having a first section having a first diameter, a second section having a tapering diameter defined by an arcuate sidewall, and a third section having a tapering diameter defined by an arcuate sidewall, and advancing the catheter to engage either the second section or the third section

to the port

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